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## **PROGRESS - REPORT**

*Dec. 1. 1951 / Jan. 31. 1952*

*Contract No : N7 onr - 35805*

*Division of Engineering*

***Brown - University***

*Providence Rhode Island*

*Sponsored jointly by*

*Office of Naval Research*

*Office of Air Research*

PROGRESS REPORT: December 1, 1951 to January 31, 1952.

CONTRACT NUMBER: N7-onr-35805.

1. Investigation of Losses in Transonic Model Sections.

During the past two months tests relating to the estimation of losses in a transonic model section have been completed and reduction of data and the preparation of a report on the subject is at present proceeding.

2. Air-Drying Equipment.

The installation of the air-drying equipment has been completed. The first test runs have been made with satisfactory results. The equipment is performing as predicted.

3. Supersonic Cascades.

The design of a supersonic cascade test section is progressing satisfactorily. Theoretical work on supersonic compressors was restricted due to items 2 and 3 above.

4. Stability of Shock Waves.

Some further work on the stability of normal shocks has been done. It seems of interest to examine in somewhat closer detail the mechanism of interaction between shocks and acoustic disturbances, and an endeavour is being made to do this.

5. Upper transonic regime.

The design and construction of a model section for the upper transonic regime is in preparation.

Prepared by: F. F. Harder

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